

Pre-Hearing Open House

TRIANGLE PARKWAY State Transportation Improvement Program Project No. U-4763 B



The North Carolina Turnpike Authority welcomes you to this Pre-hearing Open House for the Triangle Parkway project. The formal Public Hearing will begin at 7:00 pm following this Open House.

Slideshow Contents

- **Toll Roads and the North Carolina Turnpike Authority**
- **Project History**
- **Need for the Project**
- **Project Details**
- **Toll Technology**
- **Tonight's Pre-Hearing Open House and Public Hearing**



This short slide presentation:

Provides background on toll roads and the North Carolina Turnpike Authority,
Briefly describes the need for the project,
Summarizes the history of the Triangle Parkway project, and
describes the details regarding the project.

At the end of the presentation, you will be provided with information about tonight's Open House and Public Hearing and how you can provide comments and input regarding the project.

Why Toll Roads in North Carolina?

- **Conventional funding not sufficient to meet all transportation needs**
- **42% increase in population by 2030**
- **\$65 billion gap between transportation needs and revenues**
- **Expedite roadway construction**
- **Provide less congested, higher speed routes**



Why consider toll roads?

North Carolina's rapid growth has placed increasing demands on our already stressed transportation infrastructure. That trend is expected to continue in the coming years with an estimated 42 percent increase in population by 2030. Meanwhile, a projected 65 billion dollar gap exists between transportation needs and revenues during the next 25 years, which means we will meet less than half of the state's transportation needs.

Thus, North Carolina faces an important choice: find new sources of funding that could speed construction of some critical highway projects, or wait years, perhaps even decades, until traditional funds are available to build non-toll roads.

North Carolina Turnpike Authority

- **Created in 2002 to explore alternative transportation financing and project delivery methods**
- **Candidate toll projects must be in the locally adopted comprehensive transportation plans and be approved by the General Assembly**



The North Carolina Turnpike Authority was created by the General Assembly in 2002 to implement alternative financing to pay for much-needed roads during this time of rapid growth, dwindling resources, and skyrocketing costs.

All candidate toll projects must be in the locally adopted Long Range Transportation Plan.

Triangle Parkway is in the Long Range Transportation Plans as a toll road for both the Capital Area Metropolitan Planning Organization (CAMPO) and the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO).

North Carolina Turnpike Authority

- **Projects selected for development as a toll facility must have a non-toll alternative**
- **Authorized to plan, develop, construct, operate, and maintain up to 9 toll facilities**
- **Enabling legislation requires the removal of tolls once the debt is repaid**



Projects selected for development as a toll road must have a non-toll alternative. NC 55, NC 54 and Davis Drive serve as non-toll alternatives to the Triangle Parkway.

The Turnpike Authority is authorized to plan, develop, construct, operate and maintain up to 9 toll facilities in the state.

The law requires the removal of the tolls once the debt is repaid.

Triangle Parkway History

- **Need for the project first identified in 1958 as part of the original transportation plan for the Research Triangle Park**
- **The Research Triangle Foundation continued to reserve property for the Triangle Parkway**
- **Project added to the State Transportation Improvement Program (STIP) in 2004, but was never funded**



The Triangle Parkway was identified as part of the transportation plan for the Research Triangle Park when the Park was original planned in 1958.

The Research Triangle Foundation continued to reserve property for the Triangle Parkway as they updated their plans and sold parcels for development

The Triangle Parkway was added to the State Transportation Improvement Program in 2004 but it was never funded.

Triangle Parkway History

- In 2006, the General Assembly identified the project as a candidate toll road
- In 2007, CAMPO, and DCHC MPO amended their Long Range Transportation Plans to designate Triangle Parkway as a toll facility



In 2006, the General assembly identified the Triangle Parkway as a candidate toll project

In 2007, CAMPO and DCHC MPO amended their Long range Transportation Plans to designate Triangle Parkway as a toll facility

Purpose of the Triangle Parkway

- **Improve** commuter **mobility, accessibility, and connectivity** to Research Triangle Park employment center
- **Reduce congestion** on existing north-south routes that serve the Triangle Region, primarily NC 55 and NC 54



The purpose of the proposed Triangle Parkway is to improve commuter mobility, accessibility and connectivity to the Research Triangle Park employment center, and reduce congestion on the existing north-south routes that serve the Triangle Region, primarily NC 55 and NC 54

Triangle Parkways location between NC 540 and Interstate 40 through the Research Triangle Park and its interchange with Davis Drive and Hopson Road will improve mobility, accessibility and connectivity within the Research Triangle Park by providing additional choices to the driving public.

Traffic Reduction Benefits from the Construction of the Triangle Parkway

In the Design Year (2030)

- **Traffic volumes on I-40 between NC 540/I-540 and NC 147 drop by as much as 46,400 vehicles per day**
- **Traffic volumes on NC 55 between NC 540 and I-40 drop by as much as 41,600 vehicles per day**
- **Traffic volumes on NC 54 between NC 540 and I-40 drop by as much as 6,000 vehicles per day**



Based on the traffic projections using the Regional Traffic Model, the proposed Triangle Parkway will reduce congestion along several routes that serve the Research Triangle Park. The Triangle Parkway will give the driving public additional options that will allow for the dispersion of traffic.

In the Design Year of 2030, the proposed project will carry as many as 130,000 vehicles per day.

Based on the traffic projections for 2030, the construction of the proposed Triangle Parkway will reduce traffic on Interstate 40 between the NC 540 – I-40 interchange and NC 147 by as much as 46,400 vehicles per day. In 2030 it is projected that approximately 200,000 vehicles per day will use Interstate 40 both east and west of the NC 147 interchange.

The traffic volumes on NC 55 between NC 540 and Interstate 40 are projected to decrease by as many as 41,600 vehicles per day

The traffic volumes on NC 54 between NC 540 and Interstate 40 are projected to decrease by as many as 6,000 vehicles per day. While the traffic volumes on NC 54 between Davis Drive and T.W. Alexander Drive are projected to decrease by as many as 1,400 vehicles per day.

The traffic volumes on Hopson Road between NC 54 and the proposed Triangle Parkway are projected to decrease by as many as 6,800 vehicles per day. However, traffic projections on Hopson Road from the proposed Triangle Parkway to the

Project Schedule

Environmental Assessment	February 20, 2008
Public Hearing	March 25, 2008
Finding of No Significant Impact*	May 2008
Right of Way Acquisition**	Summer 2008
Construction**	Summer 2008
Open to Traffic**	Fall 2010

*Anticipated

**Subject to Availability of Gap Funding (\$20 M annually)



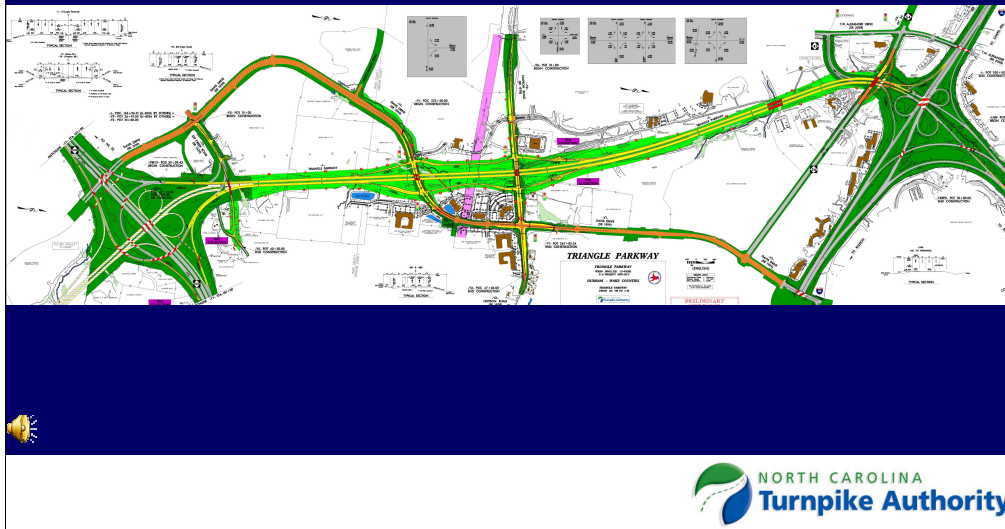
Based on the current schedule

It is anticipated that a Finding of No Significant Impact will be issued in May 2008.

If the Gap funding for the project is available, the North Carolina Turnpike Authority anticipates completing the right of way acquisition for the project and beginning construction this summer.

If construction begins as planned the project will be open to traffic in the Fall of 2010

Triangle Parkway Between NC 540 and I-40



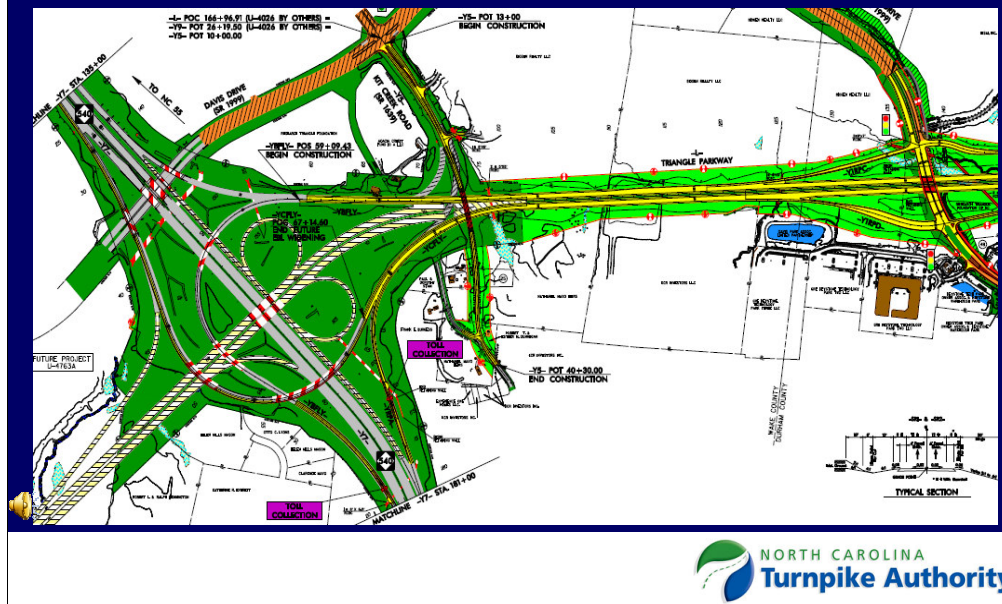
This map shows the proposed Triangle Parkway which extends for 3.4 miles on new location from NC 540 to Interstate 40 through the Research Triangle Park.

To improve traffic operations on NC 540 and NC 147, the North Carolina Turnpike Authority also will widen by one lane eastbound NC 540 from NC 55 to northbound Triangle Parkway and will widen northbound NC 147 by one lane from Interstate 40 to the T.W. Alexander Drive interchange.

Of the 168 acres of property needed to construct the project, 112 acres are within the property reserved by the Research Triangle Foundation. The project is proposed as a six-lane divided tolled roadway with access points at NC 540, Davis Drive, Hopson Road and Interstate 40.

Toll collection points are shown in purple.

Triangle Parkway at NC 540 and Davis Drive



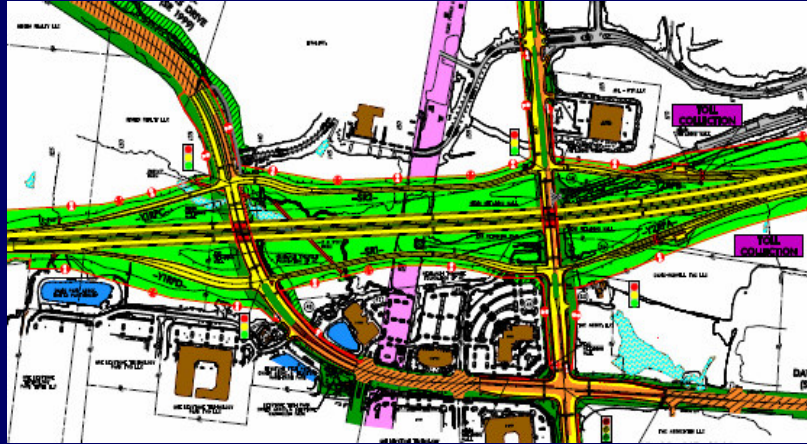
This map shows the section of the proposed Triangle Parkway between NC 540 and Davis Drive

When the North Carolina Department of Transportation opened NC 540 between Interstate 40 and NC 55 in July of 2007, they included a temporary connection from NC 540 to Davis Drive. The connection along Kit Creek Road between Davis Drive and Church Street was severed during the construction of NC 540 to provide this temporary connection.

The temporary connector to Davis Drive from NC 540 allowed traffic to access Davis Drive until the time that the Triangle Parkway could be constructed. Access to Davis Drive will be maintained by moving the connection approximately one mile north of Kit Creek Road. During construction, the North Carolina Turnpike Authority is committed to maintaining the temporary connection to Davis Drive as long as possible

Kit Creek Road will be reconnected between Davis Drive and Church Street. A bridge over the proposed Triangle Parkway will be constructed to provide this connection.

Triangle Parkway Davis Drive to Hopson Road

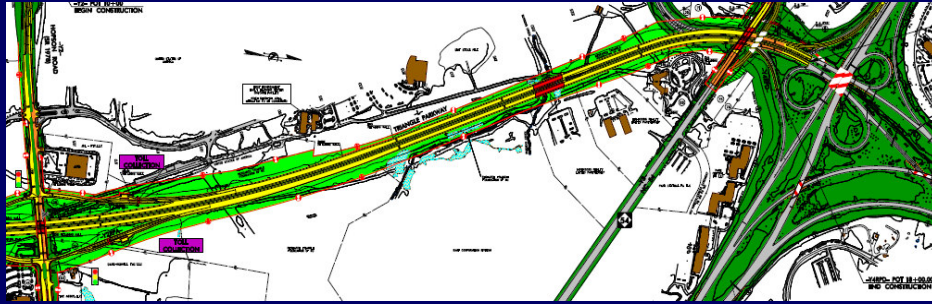


This map shows the proposed split diamond interchange to provide access from the Triangle Parkway to Davis Drive and Hopson Road. The interchange has one-way service roads between Davis Drive and Hopson Road, which also allows additional travel between Davis Drive and Hopson Road.

This design was determined to be the best option to serve the traffic operations while maintaining access to both Davis Drive and Hopson Road. An option to allow all of the traffic movements at both interchanges was studied but rejected because of the limited spacing between the two roads did not allow for the safe movement of traffic.

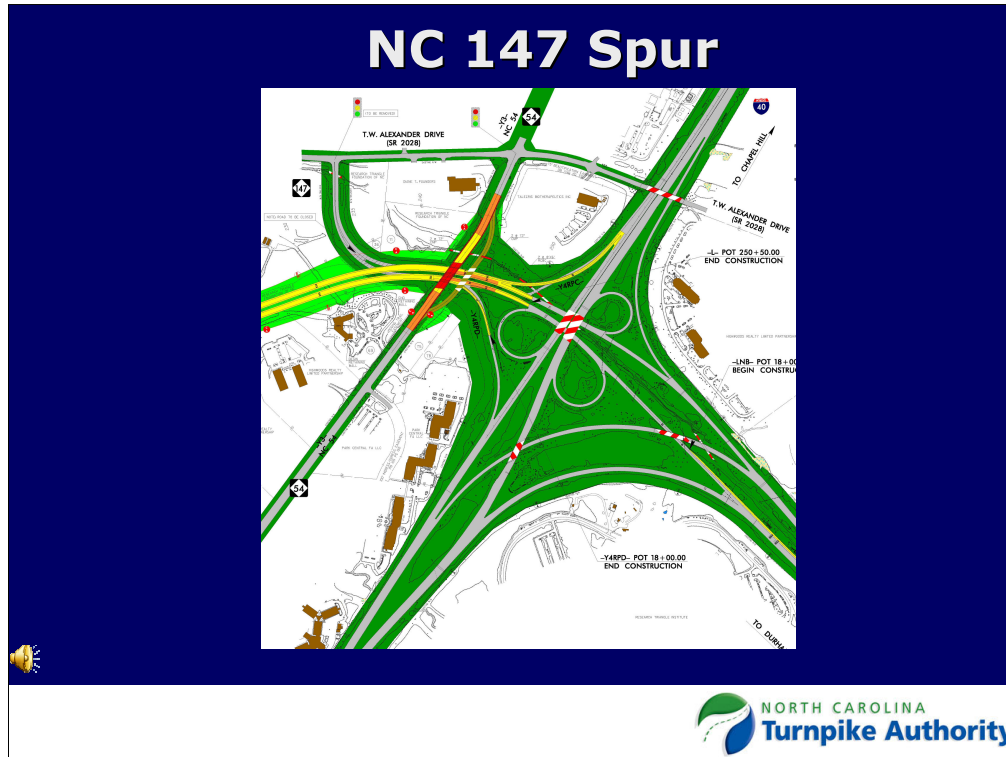
Toll collection points will be located at the entrance and exit ramps at Hopson Road.

Triangle Parkway Hopson Road to I-40



This map shows the section of the proposed Triangle Parkway between Hopson Road and Interstate 40.

The roadway was strategically located within this section to avoid impacting the EPA property to the west and the streams and wetlands to the east.



This map shows the proposed Triangle Parkway at Interstate 40

A spur connection to NC 147 was constructed by the North Carolina Department of Transportation as a temporary connector when Interstate 40 was opened 21 years ago. The NC 147 spur connects Interstate 40 to T.W. Alexander Drive. As stated in previous slides the Triangle Parkway has been planned and shown on maps of the Research Triangle Park since the Park was created. The North Carolina Department of Transportation constructed this interchange to serve as a full-movement connection for Triangle Parkway and Interstate 40.

Based on the traffic projections, approximately 6,600 vehicles per day will be re-routed to T.W. Alexander Drive in 2030 from the closing of this spur.

Due to federal design constraints, safety, and operational concerns, there is no feasible alternative to keep the NC 147 Spur open when Triangle Parkway is completed.

NCTA is committed to keeping the NC 147 Spur open as long as possible during the construction of Triangle Parkway but the NC 147 Spur will eventually require closing.

Environmental Assessment Impact Summary

- **2 residential relocations**
- **2.05 acres of wetlands impacted**
- **4,647 linear feet of perennial streams impacted**
- **12.6 acres of floodplains impacted**



During project development and concept design, Triangle Parkway was located to minimize and avoid impacts to both the human and natural environment as much as possible.

Based on the preliminary design for the proposed Triangle Parkway, the construction of the project will relocate 2 residences.

It will result in the filling of 2.05 acres of wetlands and will impact 4,647 linear feet of stream and the construction will impact 12.6 acres of floodplains.

Noise Analysis

- **Evaluated existing and future noise levels to determine traffic noise “impacts”**
 - Noise analysis takes into account traffic volumes, vehicle mix, speeds, topography and other factors
 - Noise analysis is based on 2030 predicted noise levels
 - If predicted noise levels meet NCDOT criteria for impacts, then noise abatement is considered
- **Preliminary Noise Report Complete**
 - A noise impact is predicted at First Environments Early Learning Center (FEELC)
 - A noise wall at the FEELC has been preliminarily determined to be feasible and reasonable



A preliminary noise analysis was performed along the project to evaluate existing and future noise levels to determine traffic noise impacts.

The preliminary noise analysis identified one location, the First Environments Early Learning Center, where a noise barrier was determined feasible and reasonable based on the North Carolina Department of Transportation’s approved Noise Abatement Criteria. A final decision on the construction of the noise barrier will be determined during the final design of the project.

Air Quality Analysis

- **Project level Carbon Monoxide (CO) “hotspot” analysis**
- **CO Analysis conducted at Hopson Road/Davis Drive Intersection representing “worst case” conditions**

Results

One-Hour Average – 4.9 ppm in 2030
CO Standard – 35 ppm
Eight-Hour Average – 3.4 ppm in 2030
CO Standard – 9 ppm

- **Project is in compliance with the CO standard. No violations are anticipated**



An air quality analysis was performed for the project

A carbon monoxide hotspot analysis was performed at the location that was determined to represent the worst case condition. This location should be a spot where high traffic volumes will encounter stop and go conditions. The intersection between Davis Drive and Hopson Road was selected as the hotspot for the project.

The analysis resulted in an one-hour average for carbon monoxide of 4.9 parts per million which is well below the standard of 35 parts per million

The eight-hour average for carbon monoxide was 3.4 parts per million versus the standard of 9 parts per million

Therefore, the project is in compliance with the carbon monoxide standard and no violations of this standard are anticipated

Air Quality Analysis

- **Mobile Source Air Toxics (MSAT)**
 - **Findings (Affected Transportation Network)**
 - **Could be localized MSAT increases along the Triangle Parkway and decreases along adjacent routes**
 - **46 percent reduction in MSAT emissions by 2030 despite 136 percent increase in vehicle miles traveled**
 - **Bulk of air toxics emissions reductions are due to EPA's vehicle and fuel control programs (cleaner fuels, cleaner engines)**



A mobile source air toxics analysis (MSATs) was performed for the project

The findings from the analysis showed that there could be localized MSAT increases along the Triangle Parkway and decreases along the adjacent routes

A 46 percent reduction in MSAT emissions is anticipated from the affected Transportation Network by 2030. The bulk of the reductions are due to the Environmental Protection Agencies vehicle and fuel control programs.

Toll Collection Technology



The NCTA anticipates that all toll fees will be electronically collected without cash lanes.

With the potential for continued changes in toll technology, and in light of compatibility discussions with other toll systems, the Turnpike Authority is evaluating the best systems available for the Triangle Parkway and is planning to make a decision on the in May 2008.

Toll Operations



- **Open Road Tolling – No Stopping**
- **Tolls typically range from \$0.10-\$0.15 per mile**
- **Specific costs not yet determined**
- **NC Legislation requires the removal of tolls once the debt is repaid**



The Turnpike Authority is evaluating different options available for toll collection. An open road transponder-based system will likely be the primary means of collection. This would allow drivers to open an account and drive through the toll collection points without stopping or slowing down.

How to Provide Comments?



Mail your comments



Speak at tonight's Public Hearing



Leave us your comments today



**Email the study team at
triangleparkway@ncturnpike.org**



How do you provide comments on the proposed project?

There are several ways available to provide your input.

There is a comment sheet on the back of your handout picked up at the sign-in desk in the lobby.

You can fill out the comment sheet tonight and leave it in the comment box in the lobby.

Or take the comment sheet home and mail it by April 8, 2008 to the North Carolina Turnpike Authority at the address listed on the comment sheet

You may also email your comments by April 8, 2008 to the North Carolina Turnpike Authority at the following email address – triangleparkway@ncturnpike.org

Or you can speak at tonight's Public Hearing

**Public Hearing Scheduled
on March 25, 2008
at Sigma Xi Auditorium
3106 East NC 54, Research Triangle Park**

**Pre-Hearing Open House
4:30 p.m. to 6:30 p.m.**

**Public Hearing
Begins at 7:00 p.m.**



Representatives from the North Carolina Turnpike Authority and the North Carolina Department of Transportation are stationed at each of the maps located around the room. They are available to discuss the project with you in more detail.

Please take this opportunity to discuss your questions with these representatives.

The formal presentation for the Public Hearing will begin promptly at 7:00 p.m. If you are interested in speaking at the Public Hearing, please sign up at the sign-in desk in the lobby.

Thank You for your Involvement



Music Title: "Non Stop Super"

Composer: Pierre Gerwig Langer (SESAC)



Thank you for your involvement.

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begin in 3 minutes**



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